

Work Order ID 130095

130095

Page 1

Monday, February 23, 2015 10:55:12 AM

Item ID: D4909-ITRN

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Support Turning Detail

Start Date: 2/23/2015 Start Qty: 6.00

6

Cust Item ID:

Required Date: 2/23/2015 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan: MCS

Date: 1502-23

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D4909

A

100

0.00

100

MORI SEIKI CNC LATHE LARGE

Doosan

Memo

0.00

Doosan Lathe

Turn blank as per Folio FB189

5

DAS
25
9-88

15-2-25

110

0.00

110

QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

5

DAS
25
9-88

15-2-25

120

0.00

120

QC8- Inspect parts - second check

QC

Memo

0.00

Quality Control

5

0

DAS
44
9-89

15/02/25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube ☐</td> <td>Crosstube ☐</td> <td>Water Jet ☐</td> <td>Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐															
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Large Fab ☐	Composite ☐	Supplier ☐																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence	☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge ☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other
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Work Order ID 130095

Monday, February 23, 2015 10:55:12 AM

130095

Page 2

Item ID: D4909-1TRN

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Support Turning Detail

Start Date: 2/23/2015 Start Qty: 6.00

6

Cust Item ID:

Required Date: 2/23/2015 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals: Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

0.00

130

Packaging

Packaging

Memo

0.00

Packaging

Identify and Stock in Kanban

Location: MAT 060

DAS

44

9-89

15/02/25

140

0.00

140

QC

QC21- Final Inspection - Work Order Release

Memo

0.00

Quality Control

MW 150223

ME

15-2-25

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐															
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Offset/Setup									
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Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
		☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Positioned Wrong ☐ Power Loss/Surge
		☐ Pressure/Forced ☐ Set-up ☐ Temperature/Cure ☐ Weld ☐ Wrong Stock Pulled ☐ Other

Picklist Print

Monday, February 23, 2015 10:55:17 AM

Page 1

Work Order ID: 130095

130095

Parent Item: D4909-1TRN

D4909-1TRN

Parent Item Name: Support Turning Detail

Start Date: 2/23/2015

Required Date: 2/23/2015

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP REV:A NEW ISSUE 13-04-24 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6104-011		Manufactured	No			100	Each	5.0000	1	6			

D6104-011

17-4 SS Roundbar 6.50"OD

**

2L15-2-24

Location

Loc Qty

Loc Code

MAT043

5

127419

5

5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Landing Gear ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Inspection Strip in Tube ☐ Marks/Chatter ☐ Turning Sequence ☐ Wave/Twist in Tube	General ☐ Bend ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Burrs ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Drawing ☐ Drill Holes ☐ Finish ☐ Fit/Function	☐ Folio/Program ☐ Grain ☐ Hardware ☐ Inspection Incomplete/Unqualified ☐ Instructions Incomplete/Unclear ☐ Misaligned/off center ☐ Mislabeled ☐ Misread ☐ Off-set ☐ Out of Calibration ☐ Out of Sequence
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DART AEROSPACE LTD		Work Order: 130095
Description: Turning Detail for D4909-1		Part Number: D4909-1TRN
Inspection Dwg: D4909	Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
Milling Section								
A-A	3.268	3.288		3.282	3.282	3.282	3.282	3.282
B-B	1.250	1.270		1.259	1.257	1.258	1.257	1.258
C-C	3.990	4.010		4.000	3.999	4.000	3.999	4.000
D-D	0.718	0.738		.729	.729	.729	.729	.729
E-E	0.150	0.170		.157	.157	.157	.157	.157
F-F	0.090	0.110		.098	.098	.098	.098	.098
G-G	0.090	0.110		.099	.099	.099	.099	.099
H-H	R0.022	R0.042		.032	.032	.032	.032	.032
I-I	R0.240	R0.260		.250	.250	.250	.250	.250
J-J								
K-K								
L-L								
M-M								
N-N								
O-O								
P-P								

Measured by: SL	Date: 15-2-25
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Audited by: FK	Date: 15/02/25
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Preliminary Approval:	Date:
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Rev	Date	Change	Revised by	Approved
A	14.07.07	New Issue	KJ	

DART AEROSPACE LTD		Work Order:	130095
Description: Turning Detail for D4909-1		Part Number:	D4909-1TRN
Inspection Dwg: D4909		Rev: A	Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

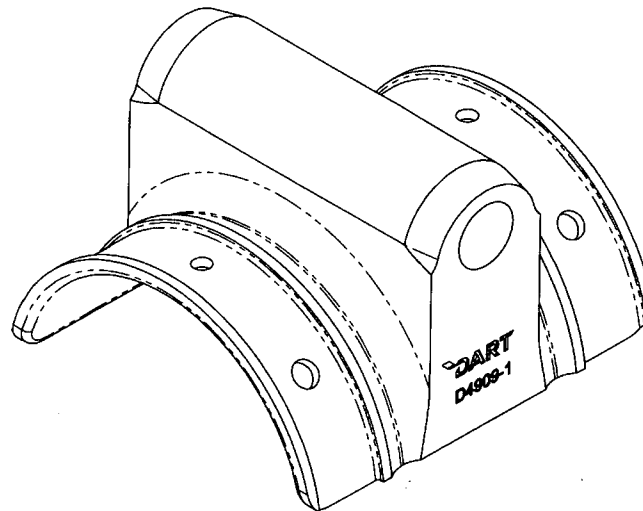
				Record Actual Dimensions				
Dim	Min	Max	Go/No Go Gauge	1	2	3	4	5
Milling Section								
A-A	3.268	3.288						
B-B	1.250	1.270						
C-C	3.990	4.010						
D-D	0.718	0.738						
E-E	0.150	0.170						
F-F	0.090	0.110						
G-G	0.090	0.110						
H-H	R0.022	R0.042						
I-I	R0.240	R0.260						
J-J								
K-K								
L-L								
M-M								
N-N								
O-O								
P-P								

Measured by:	Date:
---------------------	--------------

Audited by:	Date:
--------------------	--------------

Preliminary Approval:	Date:
------------------------------	--------------

Rev	Date	Change	Revised by	Approved
A	14.07.07	New Issue	KJ	



D4909-1 SUPPORT

NOTES:

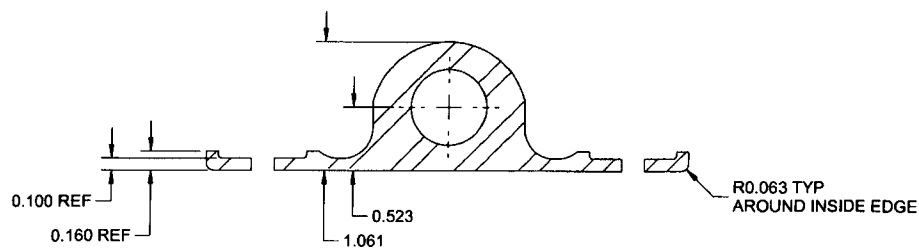
- 1) MATERIAL: MAKE FROM D4909-1TRN
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART LOGO AND P/N "D4909-1" IN INDICATED AREA
USING 0.125 HIGH X 0.010-0.020 DEEP LETTERING PER DART QSI 044 6.3,
IDENTIFY WITH DART B/N PER DART QSI 044 6.1
- 7) WEIGHT: 1.90 lbs

130 095 MLJ
1502-23

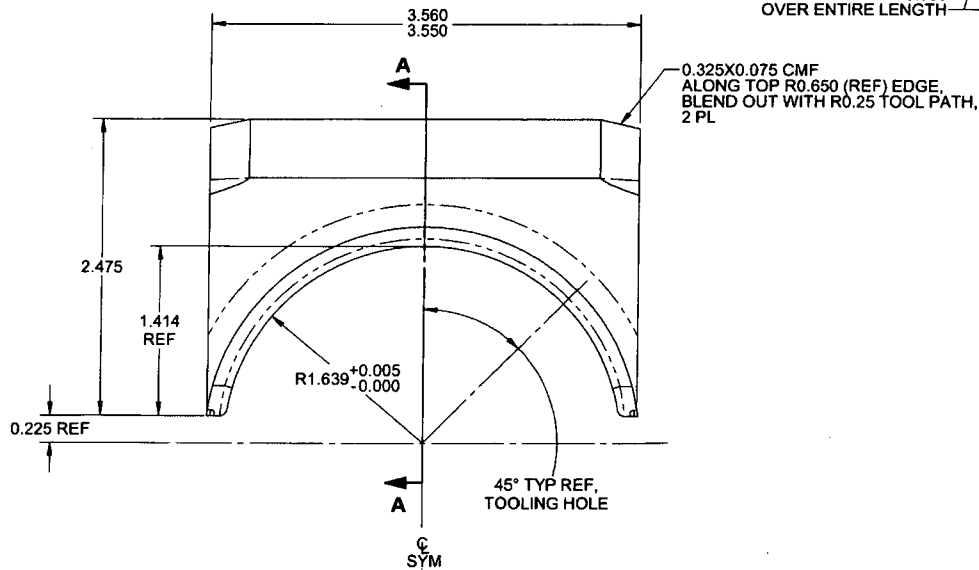
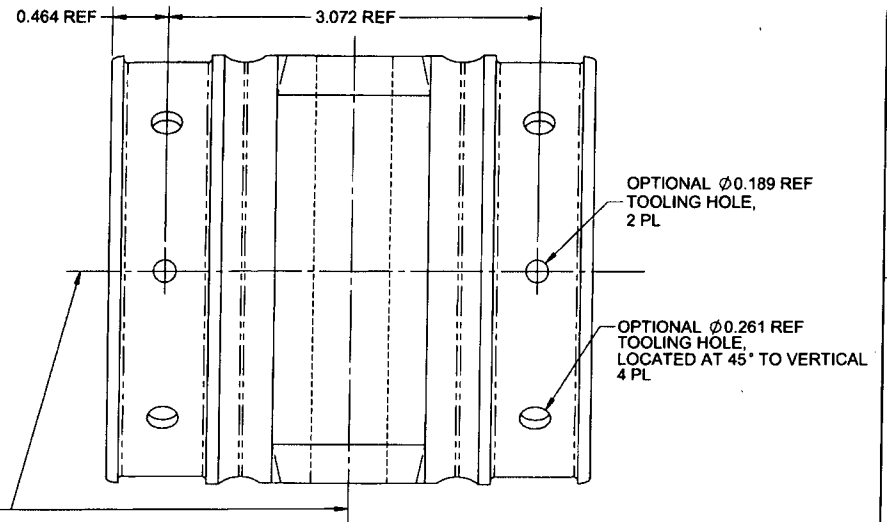
RELEASED
2013-08-06
WJ

A	NEW ISSUE	CP	13.04.08
REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	13.04.08		
DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D4909 TITLE SUPPORT REV. A SHEET 1 OF 3 SCALE NTS COPYRIGHT © 2013 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.			

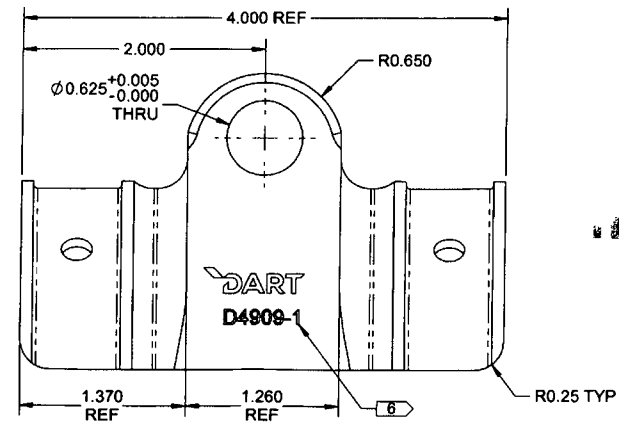
8 7 6 5 4 3 2 1



SECTION A-A
SCALE 1X



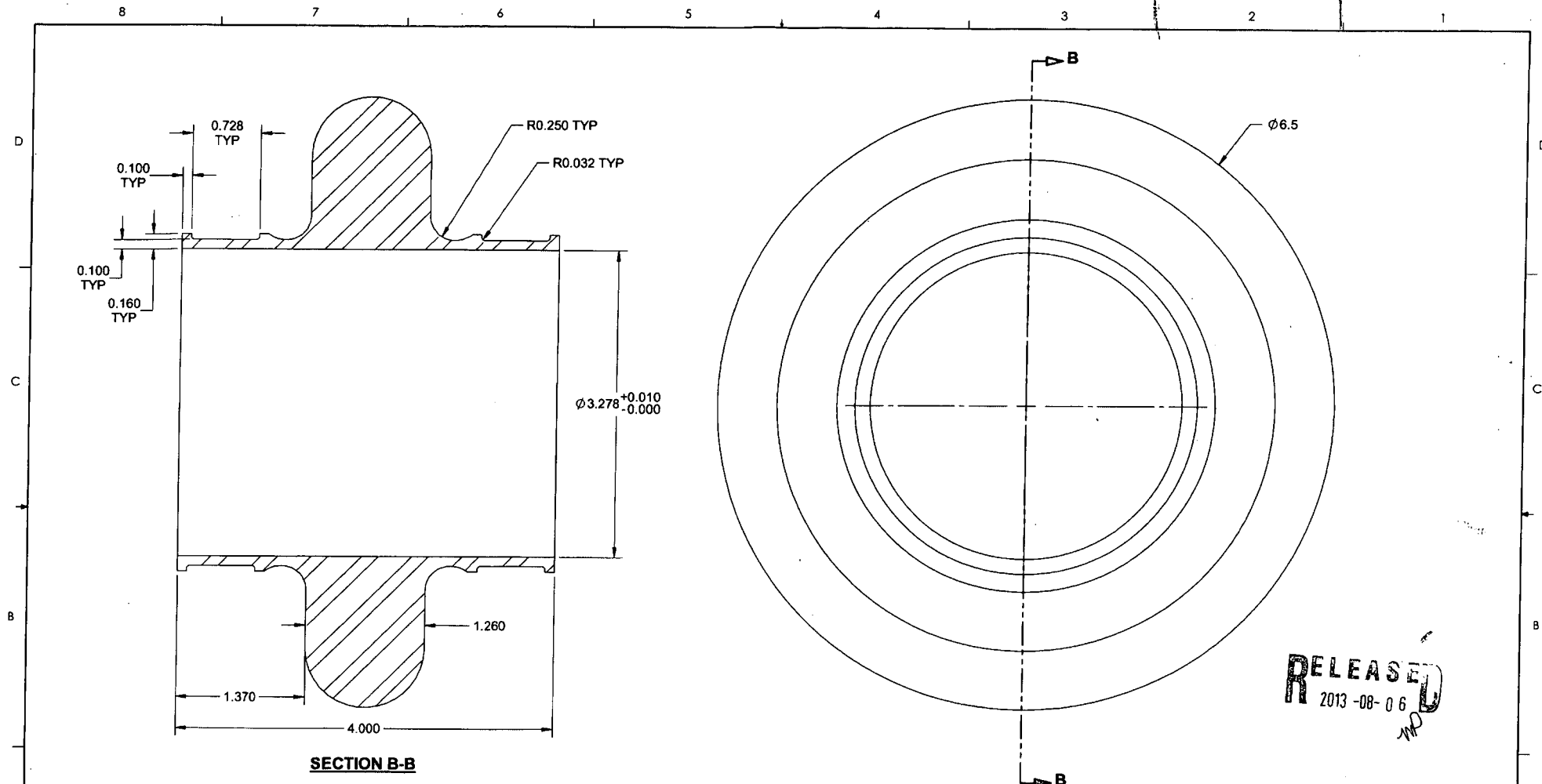
D4909-1 SUPPORT



RELEASED
2013-08-06

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. A
MFG. APPR.		D4909	SHEET 2 OF 3
APPROVED		TITLE	SCALE
DE APPR.		SUPPORT	NTS
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8 7 6 5 4 3 2 1



SECTION B-B

D4909-1TRN TURNING DETAIL

NOTES:

- 1) MATERIAL: 17-4PH / S17400 / TYPE 630 ROUND BAR PER AMS 5643 / ASTM A564, REF DART SPEC. M17-4-R
HEAT TREAT TO H900 CONDITION (900 °F FOR 1 HR, AIR COOL)
MIN UTS = 170 KSI (38 HRc)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 9.1 lbs

DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	REV. A
DRAWN			
CHECKED		DRAWING NO.	SHEET 3 OF 3
MFG. APPR.		D4909	SCALE
APPROVED		TITLE	NTS
DE APPR.		SUPPORT	
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